The MAGTF NBC Defense Concept

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The History of NBC Defense

- 20 May 1975 - FMFM-11-1 Nuclear, Chemical, and Defensive Biological Operations in the FMF
  - "The only TMR NBC Sections in the FMF are found in the G-3 sections of the Marine division and wing headquarters."
  - All remaining NBC billets are collateral duty.
- 21 Sep 1998 - MCWP 3-37 MAGTF NBC Defense Operations
  - Not staffed or validated.
  - Does not consider current and future concepts.
  - Significant structure increase since 1975 (mandated for MCWP).
- 10 Sep 2001 to Present – Deputy Commandant for Combat Development charters the NBC Operational Advisory Group (OAG).
  - The OAG completed the first analysis of the MAGTF's ability to conduct NBC defense operations.
  - Developed a MAGTF NBC Defense Concept of Operations. ➢

The OAG's Conclusions

- MCWP 3-37, MAGTF NBCD Operations, must be revised to accurately reflect how MAGTF NBC Defense Operations will be conducted in support of EMW.
- NBCD T/O&E assets must be reorganized in a manner that places them in the units responsible for executing the MAGTF's NBCD Operations.
- There is no partial remedy. The transition to the MAGTF NBC Defense Concept of Operations impacts the entire MAGTF and must be implemented in its entirety.
- All DOTMLPF deficiencies must be addressed.
  - Approximately 26 capability gaps.
  - Numerous administrative action items. ➢

Capability Gaps

The OAG identified capability gaps through their DOTMLPF assessments.

- Toxic Industrial Radiological (TIR) Detection
- Toxic Industrial Chemical (TIC) Detection
- Personal Protection Equipment for TIR/TIC
- NBC Capability Sets for Decon Operations
- Chemical Detector Paper
- Radiation Dosimeter(s)
- Low-Level Chemical Detector
- Contaminated Personnel and Vehicle Tracking System
- MOPP Drop
- Individual Equipment Decon
- Remote Chemical Detection
- Biological Detection. ➢

Capability Gaps

Continued

- Personnel hydration in a contaminated area
- Chemical Agent Resistant Coating (CARC)
- Aircraft Decontaminant
- Other Personnel Decontamination
- Decontamination Vacuum
- Radiological Protective Ensemble
- Chemical Protective Overgarment Cutter
- Chemical Agent Protective Equipment Covers
- Standoff NBC Detection
- Automated Operational Risk Management Guide
- Automated NBC Defense Operation Planning Tool
- Collective Protection
- Decontamination Apparatus
- CBRN Battle Management ➢

Action Items

The OAG identified Action Items through their DOTMLPF assessments. Some examples are:

- Phasing out of the Enhanced NBC Sets
- Publication Changes
- Review of the NBC School POI
- Changes to the POI at various Marine Corps schools and training facilities
- T/O&E Changes (MOS 57XX and NBC Equipment)
- CSF Training Allowance Determination
- Develop MOPP Drop ➢

The Way Ahead

The Deputy Commandant for Combat Development/Advocate for NBC Defense will prepare a package to obtain the Marine Requirements Oversight Council's (MROC) approval on the MAGTF NBC Defense Concept.

- Combat Development Tracking System (CDTS) Staffing
  - Concept approval is the key to moving forward. Once the Concept is approved we can address the capability gaps, and action items.
  - Changes will be gradual
    - MCWP revision
    - T/O changes
    - T/E changes ➢

Summary of Significant Changes

- The following slides outline the most significant capability increases that will result from the implementation of the MAGTF NBC Defense Concept. ➢

Summary of Significant Changes

- Increased MEU Staffing
  - Current – one CWO3 and one SSgt
  - Proposed – one CWO3, one GySgt, and one Sgt
- Increased MEF Staffing

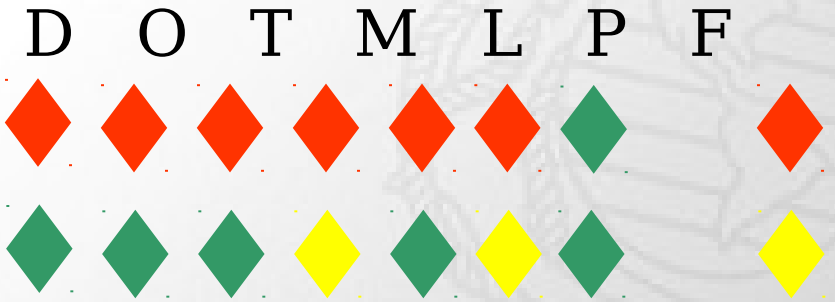
- Mirror imaged structure and equipment for like units.
- Tables of Organization and Equipment shaped to support EMW ➢

Summary of Significant Changes

New Capability Pillars. All NBC capabilities fall under one of the four pillars: Sense, Shape, Shield, and Sustain.

- **Sense** (Formerly Contamination Avoidance) - Sense provides the NBC Center (NBCC) with the capability to continually provide the MAGTF Commander information about the NBC situation by detecting, identifying, and quantifying NBC hazards in air, water, on land, on personnel, equipment or facilities. This capability includes detecting, identifying, and quantifying those NBC hazards in all physical states (solid, liquid, gas).

- **Sense Assessment**



Summary of Significant Changes

Sense Capability Increase

NBC Reconnaissance Teams – The only dedicated Sense capability in the MAGTF.

- Current capability is in LAR/CAB only.
- Increased capability from 10 teams to 55 teams to support the entire MAGTF.
  - **20 LAV Joint Service Lightweight NBC Reconnaissance Systems** (JSLNBCRS), 3 crewmembers MOS 5711 (Sgt, Cpl, LCpl), fielded to LAR and CAB, task organized by the Division NBC Center (NBCC) as a Division asset.
  - **35 HMMWV JSLNBCRS** - fielded to MWSG Hq and FSSG H&S Bn, 3 crewmembers MOS 5711 (Sgt, Cpl, LCpl), task organized by the MAW and FSSG NBCC.
- Teams trained to augment decontamination operations.

Note: The LAV JSLNBCRS will replace the M93 Fox (10 vehicles). ➢

Summary of Significant Changes

Sense Capability Increase (Continued)

- **NBC Detection Capability Levels** – The OAG established 3 detection capability levels to assist the MAGTF commanders in employing their detectors in a manner that limits redundancy while simultaneously ensuring that sufficient detectors are available to support the mission.
  - **Level I Detectors.** Large quantities, provide a limited capability, low cost.
  - **Level II Detectors.** Moderate quantities, transportable and/or man portable, detect, warn, and identify NBC Agents. May have the ability to be remotely controlled, monitored, and report via the NBC network.
  - **Level III Detectors**. Limited quantities, transportable and/or man portable, detect, warn, sample, identify, quantify. May have the ability to be remotely controlled and monitored, and to report via the NBC network. ➢

Summary of Significant Changes

(Continued)

- **Shape** (Not formerly distinguished) - Shape provides the MAGTF Commander (NBCC) with the ability to; characterize the NBC hazard and develop a clear understanding of the current and predicted NBC situation; collect, query, and assimilate info from sensors, intelligence, medical, etc., in near real time to inform personnel, provide actual and potential impacts of NBC hazards; provide the ability to conduct Operational Risk Management, and the ability to plan and execute NBC operations; envision critical SENSE, SHIELD and SUSTAIN end states; visualize the sequence of events that moves the force from its current state to those end states.

- **Shape Assessment**

Shape in the MAGTF

(Current)

Shape in the MAGTF

(Future)

Summary of Significant Changes

(Continued)

Shape Capability Increase

• **NBC Center (NBCC)** – NBCCs (formally NBC Control Centers) are not defined in current T/Os. The NBCC is organized, staffed, and equipped to oversea all Sense, Shape, Shield, and Sustain operations.

- OAG identified NBCC members and specific duties: OIC (2), Operations Coordinator (2), and JWARN Operator (2).

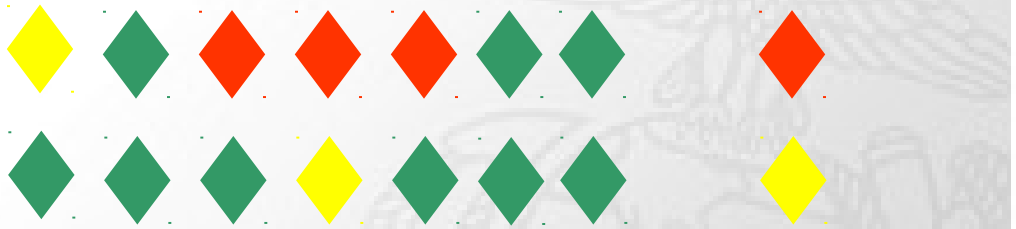
- I & II MEF – Three MOS 5702 (CWO5, CWO4, CWO3) and three MOS 5711 (MGySgt, MSgt, GySgt)
- III MEF – Three MOS 5702 (CWO4, CWO3, CWO2) and three MOS 5711 (MGySgt, MSgt, GySgt)
- Major Subordinate Commands – Two MOS 5702 (CWO4, CWO3) and three MOS 5711 (MSgt, GySgt, SSgt, Sgt) ➢

Summary of Significant Changes

(Continued)

- **Shield** (Formerly Protection) - Shield provides the MAGTF Commander (NBCC) with the capability to shield the force from harm caused by NBC hazards by preventing or reducing individual and collective exposures, applying prophylaxis to prevent or mitigate negative physiological effects, and protecting critical equipment.

- **Shield Assessment**

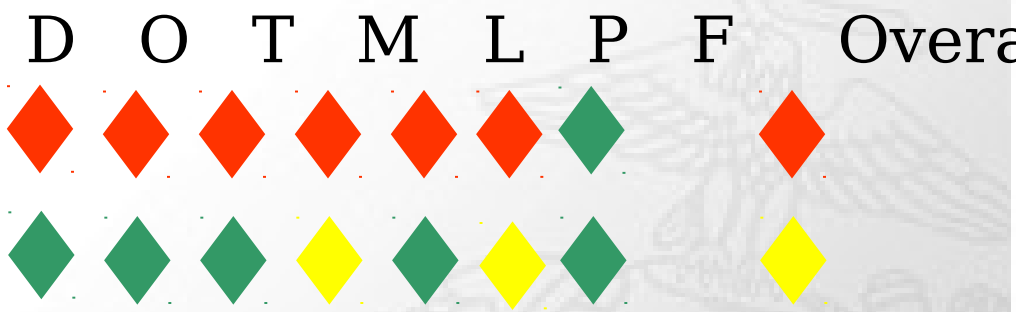


Summary of Significant Changes

(Continued)

- **Sustain** (Formerly Decontamination) - Sustain includes decontamination and medical intervention that allows rapid return of personnel and units to a near-normal operating capability after an NBC attack.

- **Sustain Assessment**



Summary of Significant Changes

(Continued)

Sustain Capability Increase

- Tailored the MAGTF's decontamination capability to support EMW
  - Focus of effort on Operational Decon
  - Easily task organized to support Thorough/Clearance Decon
  - Proposed MOPP Drop for operational decon and eliminate Detailed Troop Decon.
- NBC Decontamination Sections – NBC decon sections are not defined in current T/Os.
  - Formed 9 NBC Decon Sections (1 per MWSG Hq, FSSG H&S Bn, and Division Hq Bn. Each section can be broken down into 3-man teams based on 1 team per regiment, MAG, CSSD and MSC Command Element.
  - Decon teams are designed to be dispatched to contaminated units and operate without assistance from the contaminated unit.
  - Decon teams may be force multiplied by combining them with subordinate command NBC teams (decon teams

Questions?

MOPP Gear Exchange DOTMLPF

Doctrine

- **USMC** (Include MCO(s) through MCDP)
  - List of applicable pubs:
    - MCWP 3-37
    - MCWP 3-37.3
    - MCCS publications
  - List pubs requiring update and summary of revision required
    - MCCS standards
      - Need to incorporate MOPP gear exchange TTPs into MCCS standards for all Marines
    - Need to ensure MCWP 3-37.3 reflects current and future protective ensembles (I.e. – JSLIST and Saratoga)
- **Joint**
  - List of applicable pubs:
    - JP 3-11 Joint Doctrine for Operations in NBC Environments
  - List pubs requiring update and summary of revision required
    - Not required
- **Additional Comments**
  -

MOPP Gear Exchange DOTMLPF

Organization

- **Current**
  - Identify the units with organic capability to conduct MOPP gear exchange
    - All units
  - Identify the implementing Units
    - All units down to the squad level
  - Identify units holding ensembles
    - See above
    - MPSRONs, NALMEB.
- **Future**
  - Identify the units with organic capability to conduct MOPP gear exchange
    - N/C
  - Identify the implementing Units
    - N/C
  - Identify units holding ensembles.
    - N/C
- **Additional Comments**
  -

MOPP Gear Exchange DOTMLPF

Training

- **Current**
  - All personnel in the MAGTF
    - Summary of training required –
      - Annual MCCS training on MOPP gear exchange TTPs
    - Average time required annually
      - Annual training to standard
  - Specialized MOS training
    - MOS 5702
      - Summary of training required – Detailed training in MOS school on MOPP gear exchange TTPs and operational/logistical planning factors to conduct MOPP gear exchange operations
      - Average time required annually – None annually, ongoing MOS PME.
    - MOS 5711
      - Summary of training required – Detailed training in MOS school on MOPP gear exchange TTPs and operational/logistical planning factors to conduct MOPP gear exchange operations
      - Average time required annually – None annually, ongoing MOS PME.
  - List training aids required (training devices, GTA, etc.)
    - JSLIST/Saratoga training stock (25% min, 100% ideal)
  - List the school(s) that provide training:
    - MOS 57XX school

MOPP Gear Exchange DOTMLPF

Training

- **Future**
  - All personnel in the MAGTF
    - Summary of training required –
      - Annual MCCS training on MOPP gear exchange TTPs
    - Average time required annually
      - Annual training to standard
  - Specialized MOS training – Same as current

  - List the school(s) that provide training:
    - MOS 57XX school
    - Conducting MOPP Gear Exchange TTPs – TBS, MCT
    - Conducting/Supervising MOPP Gear Exchange – TBS, SNCOA Sgt's Course

  - List training aids required (training devices, GTA, etc.)
    - JSLIST/Saratoga training stock (25% minimum/100% ideal)
      - Consider tying into AO for JSLIST ensembles

  - NOTE: Need to examine simplifying procedures to make MOPP gear exchange an easier process to safely accomplish.

  - If IPE migrates to CIF/SSSF, need to ensure that training is offered to maintain subject matter expertise in maintenance of IPE.

MOPP Gear Exchange DOTMLPF

Materiel

- **Current**
  - Saratoga/JSLIST
    - Basis of Issue (used to derive AO):
      - Four per individual
        - Two per individual held organically by the unit
    - Associated technical pubs:
      - TMs are Required
    - Does it adequately support the operation (explain if not)? YES
      - Decon all Chem Agents
      - Decon Bio
      - Decon RAD
      - Passes KISS test
    - Is current allowance sufficient (explain if not)? NO
      - There exist current shortfalls in footwear/gloves due to shelf-life expiration

MOPP Gear Exchange
DOTMLPF

Materiel

- **Future**
  - JSLIST (to include MULO/JB2GU)
    - Basis of Issue (used to derive T/E):
      - Three/individual (Two/individual held organically by the unit)
    - Does it adequately support future operational concepts (explain if not)? NO
      - Too many sizes. Need to look at alternatives to simplify tariffing of suits.
      - Should examine alternative designs to facilitate doffing
  - Next generation protective ensemble objective
    - Duty uniform.

MOPP Gear Exchange DOTMLPF

Materiel

- **Current Maintenance**
  - Maintenance required
    - N/A
  - Cyclic Inspection
    - Conducted by
      - 57XX
    - Average time required annually (each)
      - ~5 minutes/ensemble
  - Reports
    - Included in Annual Report to Congress
    - Considered in CBD Readiness Reporting (SORTS)

- **Future Maintenance**
  - Maintenance required – Not desired, should be N/A.
  - Cyclic Inspection – Not desired, should only need to inspect packaging periodically (not more than once annually, not ever ideally)
  - Reports
    - Included in Annual Report to Congress
    - Considered in CBD Readiness Reporting (SORTS)

MOPP Gear Exchange
DOTMLPF

Materiel

- **Current Embarkation**
  - List Method(s)
    - Unit Issue (Garrison)
    - Individual Issue (Contingency)
    - Embark Container (List Types)
      - Any container PALCON or larger
  - Is packaging sufficient for embark? YES
    - Does it withstand repeated issue? YES
    - Does it withstand exposure to the environment? YES
    - Does it withstand long-term storage (I.e. – CRSP, Admin Storage)? YES.
  - Is it adequately marked? YES, except for GVO/BVO.

- **Future Embarkation**
  - Method(s) desired
    - Desire ability to store suit outside of Level A original containers
  - Packaging Required
    - Ensemble components packaging only
- **Special handling requirements (HAZMAT)?**
  - Current
    - None
  - Future
    - None desired

MOPP Gear Exchange
DOTMLPF

Leadership

- ❑ **N/A**

MOPP Gear Exchange DOTMLPF

Personnel

- **Current**
  - **Identify the Responsible Commodity in Garrison:**
    - NBC Personnel
  - **Identify the Responsible Commodity in Contingency:**
    - NBC Personnel
    - Individually Issued
  - **Identify Users:**
    - All personnel assigned to operating forces
  - **Identify Maintainers:**
    - NBC Personnel
    - Individual users

MOPP Gear Exchange
DOTMLPF

Personnel

- **Future**
  - **Identify the Responsible Commodity in Garrison:**
    - CIF/SSSF
  - **Identify the Responsible Commodity in Contingency:**
    - NBC Personnel (using units)
    - Individually Issued
  - **Identify Users:**
    - All personnel assigned to operating forces
  - **Identify Maintainers:**
    - NBC Personnel
    - CIF Personnel
    - Individual users

MOPP Gear Exchange
DOTMLPF

Facilities

- **Current**
  - Are there special storage requirements (list if yes)?
    - No
  - Total CuFt in storage configuration – (Research specific tech data)
  - Are sufficient facilities available to store current stock? YES
- **Future**
  - Must not require special/climate controlled storage? YES
  - Total CuFt in storage configuration should not be increased for an equivalent capability. (Trade space – will accept marginal increase in size for significant increase in performance).
  - Must have sufficient CIF/SSSF space to accommodate IPE.

Return

MOPP Exchange Summary

MCWP 3-37.3 states “A MOPP-gear exchange can be done with a buddy team, a triple buddy team, or an individual (emergency). For planning purposes, estimate about 60 minutes for a squad or a platoon to complete the exchange. Since individual performance is severely degraded after 6 hours at MOPP4, the MOPP-gear exchange should be scheduled before that time.” The decon IPT concluded that the MAGTF will have several problems related to the conduct of MOPP Exchange.

1. Requires substantial logistics support; water, decontaminants, site supplies, re-supply of NBC IPE. This makes it impossible to conduct at a squad level as indicated by the MCWP. Sufficient supplies are not available.
2. The multiple methods (buddy team, a triple buddy team, or an individual (emergency)) are extremely complex, requiring supervision by highly trained personnel or NBC specialists. Training is not sufficient.
3. The lack of a Marine Corps concept for the conduct of MOPP exchange that eliminates the “squad” on its own concept reflected in the MCWP will result in the MAGTF’s inability to sustain operations.
4. Allowing squads to conduct MOPP exchange without HHQ oversight will result in contaminated NBC IPE and hazardous decontaminants spread around the battlefield without a means of locating them.

The IPT concluded that the MOPP Exchange procedures themselves do not adequately support the MAGTF.

1. Most maneuver elements will move out of a contaminated area as quickly as possible before conducting MOPP exchange. Units located on fixed sites must move if possible or implement a ConOps that allows them to continue to operate in a contaminated area. MOPP exchange does not support either of these scenarios. The major deficiency being that MOPP exchange requires an individual that has completely removed all NBC IPE with the exception of the mask, to don IPE to MOPP-4 and continue the mission until a time when selective unmasking can be done. This is a needless delay that can be eliminated through a modification of the MOPP exchange procedures and TTPs. Dressing back to MOPP-4 must be the exception rather than the rule.
2. The logistic support must be reduced. This can be accomplished by eliminating the need for decontaminants wherever possible and/or replacing the current decontaminants with decontaminants that do not require additional containers to mix, applicators, and water to apply or rinse.
3. 60 minutes for a squad to undress is unacceptable.

The IPT has determined that the Marine Corps must pursue an alternative technique for the MAGTF to be able to sustain operations following a CBRN attack. MOPP Drop is an exploratory Marine Corps

Backup

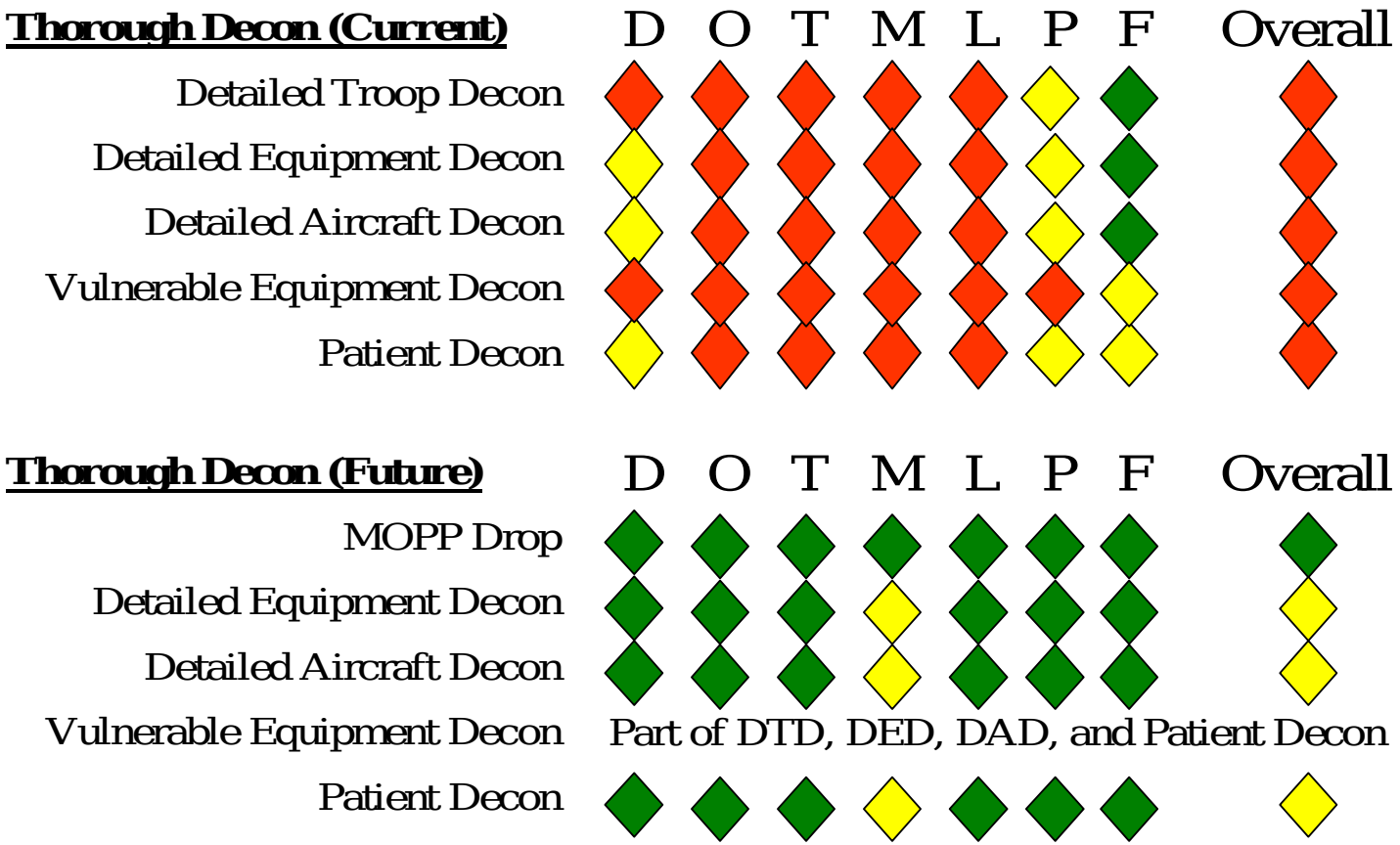
Capability Color Coding

- The following slides depict the IPTs assessment of the MAGTF's ability to conduct current and future decontamination operations. The color coding definitions are as follows:

  - Green = Combat Ready, MAGTF is able to conduct and sustain the operation.
  - Yellow = Marginally Combat Ready, MAGTF is able to conduct but not sustain the operation.
  - Red = Not Combat Ready, MAGTF is not able to conduct or sustain the operation.

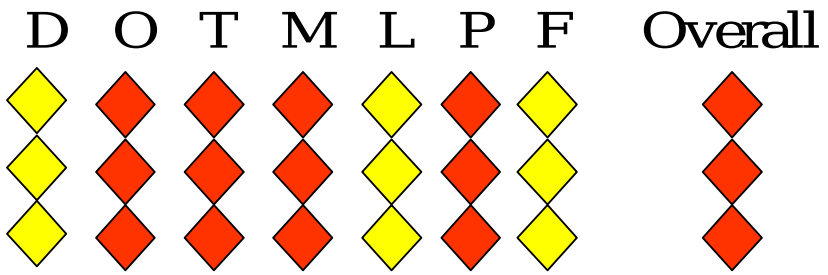
- The overall color coding is equal to the lowest coded area.

Backup

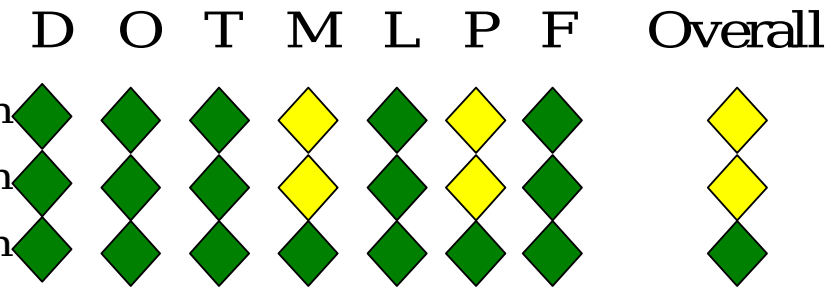

Thorough Decon (Current)
D O T M L P F Overall
Detailed Troop Decon
Detailed Equipment Decon
Detailed Aircraft Decon
Vulnerable Equipment Decon
Patient Decon
Thorough Decon (Future)
D O T M L P F Overall
MOPP Drop
Detailed Equipment Decon
Detailed Aircraft Decon
Vulnerable Equipment Decon
Part of DTD, DED, DAD, and Patient Decon
Patient Decon

Backup

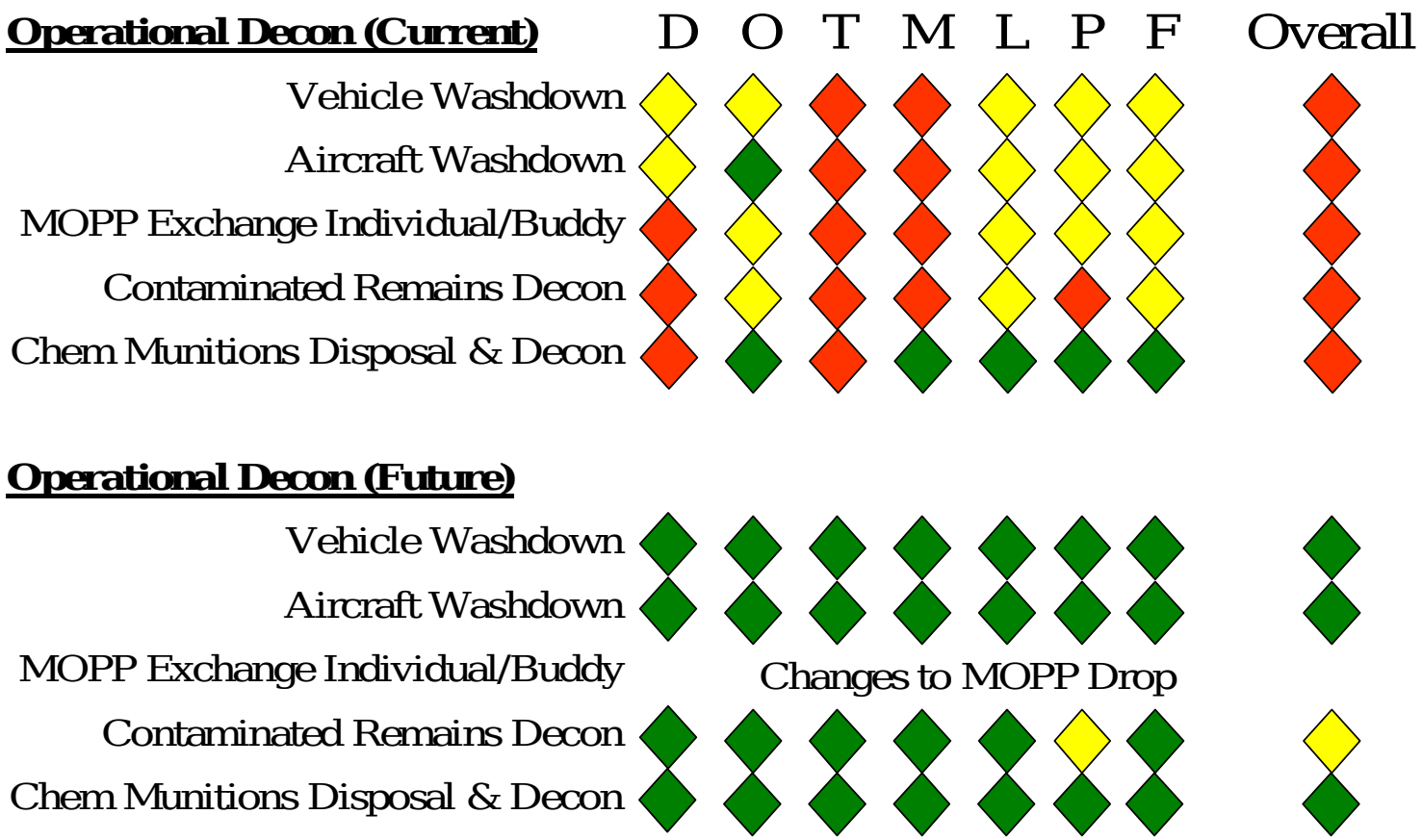
Special Decon (Current)



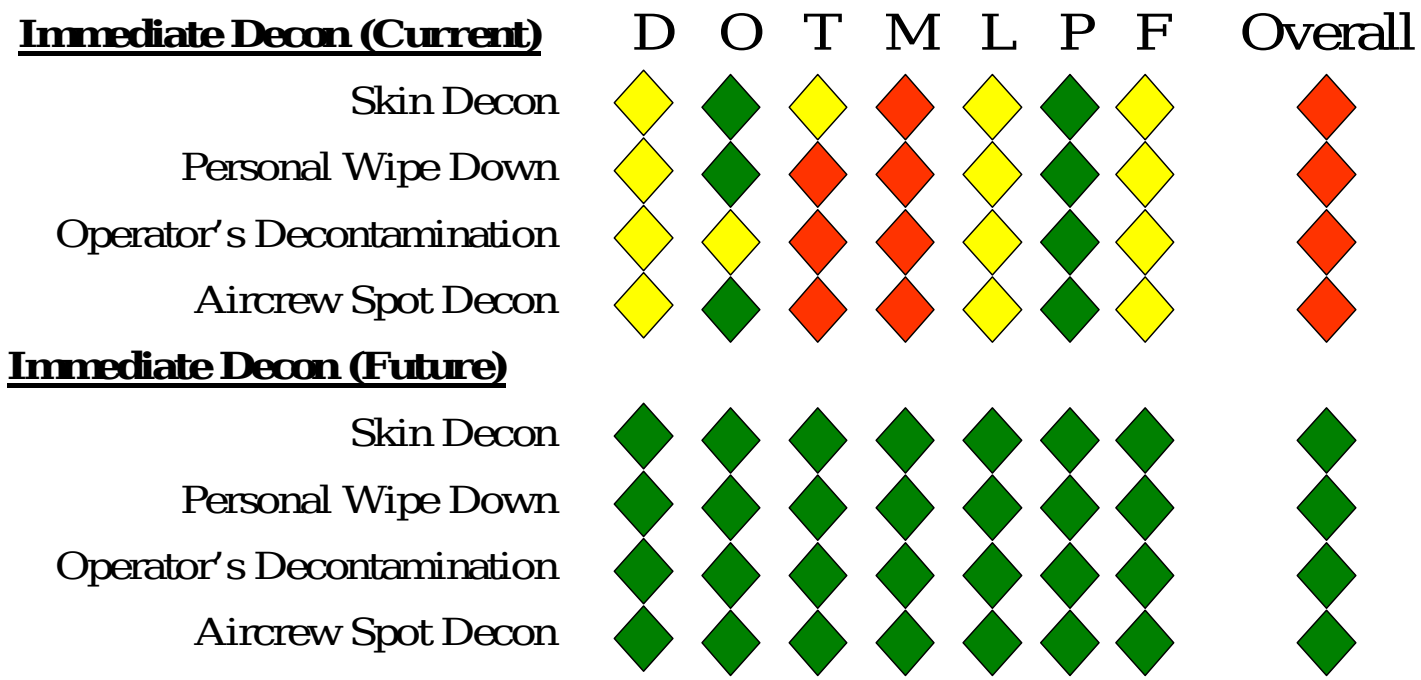
Special Decon (Current)



Backup


Operational Decon (Current)
D
O
T
M
L
P
F
Overall
Vehicle Washdown
Aircraft Washdown
MOPP Exchange Individual/Buddy
Contaminated Remains Decon
Chem Munitions Disposal & Decon
Operational Decon (Future)
Vehicle Washdown
Aircraft Washdown
MOPP Exchange Individual/Buddy
Changes to MOPP Drop
Contaminated Remains Decon
Chem Munitions Disposal & Decon

Backup


Immediate Decon (Current)
D O T M L P F Overall
Skin Decon
Personal Wipe Down
Operator's Decontamination
Aircrew Spot Decon
Immediate Decon (Future)
Skin Decon
Personal Wipe Down
Operator's Decontamination
Aircrew Spot Decon